Evidence Based Library and Information Practice

The Urgency and Importance of an Active Information Seeking Task Influence the Interruption of Information Encountering Episodes

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A Review of:
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Abstract

Objective – To understand when and why information encountering episodes are interrupted.

Design – Naturalistic observational and interview study.

Setting – Personal network of the study authors in London.

Subjects – Fifteen personal contacts of authors, aged 22-60, recruited via word-of-mouth and social media.

Methods – Each participant was asked to conduct a search on a self-chosen topic. The researchers took notes and recorded search interactions and think-aloud protocols. After the search, a follow-up interview asked whether the participant had unexpectedly encountered any interesting or useful information; if so, the researchers asked for more details about that episode. If not, they conducted a critical incident technique interview, focused on a memorable example of a past information-encountering episode. The researchers used inductive thematic analysis to analyze the data, augmented with constant comparison across the data and the themes to ensure analytical rigor.

Main Results – The most frequent point at which participants interrupted an information encountering (IE) episode was near its beginning, when the searcher noted an information stimulus but then immediately returned to the active information seeking task. IE episodes were also interrupted 1) after the searcher examined the encountered content but did not explore it further, and 2) after the searcher explored it but decided it was not useful.

The factors that influenced interruptions of IE episodes included the searcher's reluctance to invest the time and effort needed to engage with the encountered information, due to the importance or urgency of the active information seeking task; the searcher's reluctance to leave the active information seeking task, seeing IE as a distraction from that task; the searcher's reluctance to multitask, i.e., to keep track of both the IE episode and the active information seeking task; the searcher's reluctance to risk a dead end; the searcher's reluctance to be seduced by the "shiny thing" of encountered information (p. 136) and to drift too far away from the active information seeking task; and the searcher's reluctance to get "caught up" emotionally in the IE episode (p. 138), a "temptation that is satisfying only in the short-term" (p. 138).

Conclusion – Overall, the results help us understand when and why disruption of IE can occur. When an IE episode begins, the searcher is not able to estimate the time and effort required to pursue it or the fruitfulness of following it through. Thus, factors associated with the primary information seeking task (e.g., its importance or urgency) and with the searcher (e.g., ability to multitask) tend to influence decisions about when to interrupt an IE episode.

Commentary

Information encountering is defined by the study authors as "a type of serendipitous information acquisition that involves passively finding *unexpected* information that was not purposively sought and is considered subjectively interesting, useful, or potentially useful" (p. 127, emphasis in original). An IE episode consists of several stages, including noticing an informational stimulus, stopping the active information seeking task, acquiring and examining the encountered content, exploring or following up on that content, capturing or using that content, and possibly resuming the active information seeking task (p. 128; based on Erdelez, 2004; Jiang et al., 2015). The authors of this study faced a challenge in clarifying their focus: we are more accustomed to thinking about information encountering as an interruption of an active information seeking episode, but this study focused on interruptions to an IE episode. Readers will need to keep this focus in mind as they consider the findings from this study and the implications of those findings.

While the authors did an excellent job of defining the scope of IE and its interruptions, studies of searchers' stopping behaviors during active information seeking (e.g., Wu & Kelly, 2014; Maxwell et al., 2015; Dedema & Liu, 2019) are also pertinent. For example, Maxwell et al. (2015) found that searchers most often stopped their review of results after seeing too many non-relevant results, i.e., when they'd reached the point of frustration. Thus, the searcher's affective response seems to play a role in interruptions to an active information seeking task as well as interruptions to an IE episode. Both bodies of literature will be useful to practitioners as they train new searchers, design search systems, or provide assistance during searches.

The methods used to conduct the study are generally strong and appropriate for the study's purposes (Critical Skills Appraisal Programme, 2018). Because IE episodes cannot be assigned in a lab study, the overall design was necessarily naturalistic. Because the occurrence of IE episodes is spontaneous, the sample of participants was necessarily a convenience sample and only five of the participants actually experienced an IE episode during the observation. The authors filled this gap in the data by conducting critical incident interviews with the other ten searchers. While this is a reasonable approach, other approaches

were possible: using data only from those who experienced IE and expanding the sample until theoretical saturation was reached, or conducting critical incident interviews with all participants to compare and validate the quality of the data collected with each method. At a minimum, it would have been useful if the text of the paper had noted which data points came from observations versus interviews. Rigorous data analysis, including detailed thematic analysis augmented with constant comparison of the themes, balanced this slight weakness in the data collection method. In addition, the description of the results provides enough examples from the data for the reader to be confident in the validity of the findings.

The findings of this study have implications primarily for search system design. One underlying question not asked is whether search system designers should encourage or discourage IE. Since IE often yields references that are interesting or useful, one could argue that systems should support more and better IE. On the other hand, IE tends to distract the searcher from an ongoing active information seeking task; depending on the priority of that task, it may be more appropriate for systems to discourage IE and encourage a focus on the active information seeking task. A third possibility is that the system could detect circumstances in which it should encourage IE and those in which it should discourage IE, and respond appropriately. It would have been interesting to hear the authors discuss this question and the future research studies needed to clarify tradeoffs and the role of uncertainty before and during an IE episode.

The authors of the study do suggest some ways in which search engines can better support searchers' decisions about whether to continue an IE episode or return to their active information seeking task. These include ways that systems could support the pursuit of IE (e.g., through a user-controlled "serendipity filter" or history-based highlighting) or the delay of IE to be taken up at a later time (e.g., by temporarily "parking" encountered information or sending notifications to review parked content during the searcher's "dead

time"). These recommendations seem fruitful for further development in general search engines, digital libraries, and online catalogs, but most of them will require that we first gain a better understanding of the role of IE in relation to a searcher's active information seeking activities.

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